



# National Weather Service

## Storm Data and Unusual Weather Phenomena



November 1998

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
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### WISCONSIN, Southeast

WIZ046>047-051>052-  
056>060-062>072

Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane -  
Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha

10 0900CST  
11 0200CST

4 14 10.4M 1.6M High Wind

Screaming high winds raked all of southcentral and southeast Wisconsin's counties for about 17 hours, resulting in widespread damage to thousands of trees, homes, businesses, power poles, power lines, street lights, road signs, billboards, fences, flagpoles, barns, sheds, crops, boats, cars, trucks, campers, trains, airport hangers, and airplanes. Four people were killed, and 14 people were injured. Estimated monetary damages were \$10.31 million to property and \$1.625 million to crops. The sustained southwesterly winds of 30 to 40 mph gusted to 60 to 70 mph, with isolated locations having gusts to around 80 mph. These relentless winds eventually caused about 125,000 customers to lose electrical power. So many poles and lines were toppled that some customers were without power for 3 or 4 days! Preceding the powerful winds was a line of thunderstorms that dumped 1 to 2.5 inches of rain across the area. This resulted in some urban (street and basement) and small stream flooding in the Milwaukee to Kenosha area.

The responsible low pressure tracked from northern Kansas to northcentral Iowa to near Superior in northwest Wisconsin by mid-afternoon. Due to rapid intensification, the central pressure eventually dipped to 28.43 inches (963 millibars) in Albert Lea, MN, and Austin, MN. At Madison, the pressure dropped to 28.98 inches, in Milwaukee, 28.90 inches, in Fond du Lac, 28.95 inches, and 28.87 inches in Wisconsin Dells. WSR-88D Doppler radar wind speeds registered 65 kts (75 mph) 2000 feet above ground level and 120 kts (135 mph) at 15,000 feet over the NWS Forecast Office near Sullivan in eastcentral Jefferson County! Interestingly, a peak gust of 76 kts (87 mph) was recorded on top of the 15-story Atmospheric and Oceanic Sciences building on the UW-Wisconsin campus! This path of this low pressure was very similar to the path of an intense low pressure on November 10, 1975, whose winds generated 15 foot waves on Lake Superior, resulting in the sinking of a large ore boat.

Following is a county-by-county breakdown of additional specifics

1) Marquette Co: gust of 53 kts (61 mph).

2) Green Lake Co: barn was levelled on outskirts of Berlin. Shingles were ripped off a business in the city of Green lake. Light poles were bent by the wind in Berlin, resulting in damage to Christmas decorations.

3) Sauk Co: A shed was demolished in Baraboo area. A tree fell on a trailer near Lake Delton. Many trees and power lines downed in eastern part of county near the Wisconsin River. About 1000 customers without electrical power at one time. A gust of 56 kts (65 mph) was measured in Baraboo.

4) Columbia Co: a 50 year old woman drowned after being knocked by a high wind gust into the Wisconsin River. She was pulled underneath by an undercurrent in turbulent and wind-whipped waters in the Township of Dekorra. She was helping her husband load a pontoon boat onto a trailer. A semi truck was tipped over on I-94. In the city of Columbus, a home's brick chimney was damaged, and the roof of a balcony was ripped off. A wind gust of 57 kts (66 mph) was measured at Wisconsin Dells.

5) Iowa Co: an elderly man near Cobb suffered a head injury after being knocked down by a gust of wind. A semi truck driver was injured when his vehicle was flipped over by a wind gust on Highway 80 just north of Stephens. There were 5 other semi roll-overs in the county. In Dodgeville, an apartment building and hotel had roof damage, and a new home under construction was demolished. A barn collapsed in rural Hollendale near the intersection of Hwys 39 and F. A new building was torn up near Spring Green. A gust of 60 kts (69 mph) was measured in Barneveld, and 56 kts (64 mph) in Mineral Point. In northwest Iowa county, on a wind power tower, a gust of 69 kts (79 mph) was measured at the 40 meter level.

6) Dane Co: an 87 year-old man died after being hit by a car that was blown sideways by a wind gust at 515 pm on the north side of Madison. On the Capitol Square, a business had a window blown in. Several businesses in Mt. Horeb sustained wind damage. In Monona, a roof was torn off a multi-unit apartment building, and 4 other nearby buildings also had damage. A couple businesses in Stoughton had wind damage. Around 4pm a dozen semi trucks were flipped over on I-90/94, and several more on US18/151 and Hwy 51. Several barns in the county had wind damage. Some moored boats on Lake Kegonsa were pushed into each other, resulting in damage. Measured winds gusts include 57 kts (66 mph) at both Verona and Mt. Horeb, and 53 kts (61 mph) at Waunakee.

7) Lafayette Co: a large portion of the Darlington High School roof was ripped off around 1130 am. Elsewhere in the county, 15 farm buildings were damaged and another 5 destroyed. Five homes in the county sustained damage due to fallen trees, and 1 business suffered structural damage. Several county roads were blocked by tree debris.

8) Green Co: semi roll-overs were reported on US 11/81, and Hwy 81 in the town of Monroe. An airplane was flipped over at the Brodhead airport. A silo roof was blown off on County M about 4pm. Damage was inflicted on county salt sheds in New Glarus and Brodhead. About 5000 customers were without power at one time. Measured winds were 56 kts (64 mph) at Monroe and 50 kts (58 mph) in New Glarus.

9) Rock Co: in Beloit, 25 large trees were knocked down, resulting in damage to several homes. About 1/3 of the Janesville Parker



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### WISCONSIN, Southeast

High School roof was torn off by wind gusts. In Evansville, a couple businesses had blown-in windows, and siding was peeled off on 5 other buildings. In Edgerton, 2 homes sustained damage from fallen trees, and 5 businesses had siding peeled off. At one time, about 14,000 county electrical customers were without power. Measured wind gusts include 59 kts (68 mph) at the Rock County Airport about 930 am, and 56 kts (65 mph) up at Milton.

10) Fond du Lac Co: in the city of Fond du Lac, sheet metal and siding on a church steeple was peeled off by the wind, and over 100 homes had damage. In Eden, a shed was blown away. Two semi's were flipped by the wind on Hwy 41, and some cars were pushed into the ditch. In Oakfield, the roof of a pig barn was ripped off. About 2800 county electrical customers were without power at one time. Peak measured gusts were 67 kts (77 mph) in St. Peters, and 64 kts (74 mph) in Fond du Lac. Southeast of the city of Fond du Lac, on the ridge, a gust of 69 kts (79 mph) was measured on a wind power tower at the 40 meter level.

11) Sheboygan Co: a women in the city of Sheboygan was injured by flying glass debris after a window was blown out of a business. Two other city businesses suffered roof/sheet metal damage. A barn near Plymouth was levelled. A semi truck was tipped over on Hwy 23 west of Sunset Rd. Three homes in Sheboygan Falls were damaged by felled trees. A gust of 59 kts (68 mph) was measured in the city of Sheboygan.

12) Dodge Co: scattered damage was reported in all parts of the county. In Juneau, a roof was ripped off a business building. Three semi trucks were flipped over... 2 in the Horicon area and one near Hartford. About 2000 county customers were without electrical power at one time due to downed power lines. Two schools closed early. There was a multiple-vehicle accident near the intersection of Hwy 151 and 16-60 due to vehicles being pushed sideways by gusts. A gust of 58 kts (67 mph) was registered at the Juneau Airport. In eastcentral Dodge county, on a wind power tower, a gust of 70 kts (81 mph) was measured at the 40 meter level.

13) Washington Co: about 8000 customers lost electrical power at one time or another. Two semi trucks were flipped over on Hwy 45, resulting in the closure of the road. The county 911 center logged 54 call for damage assistance. A barn was blown down on Hwy 28 near Kewaskum. Several schools closed early.

14) Ozaukee Co: siding was ripped off several homes and telephone poles were snapped in Port Washington. In Belgium about 1/4 of a roof was torn off a building under construction. Several schools closed early in Mequon and Thiensville. A gust of 56 kts (65 mph) was measured in Port Washington.

15) Jefferson Co: a Ft. Atkinson women was injured after she was blown by a wind gust into the side of her home. At 1505CST a semi-truck driver was injured when his truck was flipped over on I-94 near the Hwy 26 interchange. Another semi was overturned by a gust on US 18 near Hwy 89. At least 17 homes in the county sustained damage from tree debris. Many acres of corn crop were flattened. A barn was blown across Hwy 106 east of Ft. Atkinson. About 6000 customers lost electrical power at one time or another. A concrete wall, part of a new grocery store In Ft. Atkinson, was blown down. A peak gust of 67 kts (77 mph) was measured at the Watertown Airport at 1336CST, and 59 kts (68 mph) at 0859CST. The NWS Office near Sullivan came in with 53 kts (61' mph).

16) Waukesha Co: this county was hard hit. Two women were injured in Muskego after a tree fell on their car. In New Berlin, a man was injured after his motorized garbage cart was rolled over by a wind gust. On Hwy J in the Town of Pewaukee, the driver of a car was injured after a tree fell on his car. At one time or another, about 15,000 customers were without electrical power in the county. A semi-truck was flipped over by a gust on I-94 near the Hwy 83 interchange. At least 3 barns in the county were badly damaged. In both Muskego and Sussex, two new walls at a school construction sites were toppled. A construction site on Hwy 36 near Burlington was badly damaged by the wind gusts. At the Waukesha Airport, where a gust of 54 kts ( 62 mph) was measured, 20 hanger doors were ripped off. A gust of 59 kts (68 mph) was measured elsewhere in the city of Waukesha. Several boats were damaged on county lakes due to large waves.

17) Milwaukee Co: this county was hard hit. An 87 year-old man died on November 16th, after being in a coma, as the result of head injuries received upon falling facefirst on his sidewalk on the 10th. Apparently, a wind gust ripped a door from his hand as he was opening it, causing him to lose his balance and fall. At the Southridge Mall, a women was injured in the head after being blown over by a powerful wind gust in the parking lot. Hundreds of trees were uprooted across the county, resulting in damage to dozens of homes, apartments, and businesses. At one time or another, about 20,000 customers lost electrical power. Traffic lights were knocked out of service at 75 intersections. A train sustained damage from tree debris while moving thru the northern part of the county. Significant damage was reported to gates, ground equipment, and signs at General Mitchell Int'l Airport. A peak gust of 70 kts (80 mph) was measured in Cudahy, 59 kts (68 mph) at the Milwaukee Airport, and 53 kts (61 mph) in downtown Milwaukee.

18) Walworth Co: a semi-truck driver was injured after his vehicle was flipped over by the wind on Hwy 11 near the Racine Co. line. At least 6 businesses and nursing homes in the county had roof damage. A semi-truck rollover on I-43 near the Hwy X interchange resulted in spilled fuel that closed the road. Several Whitewater buildings and a stadium had damage as winds gusted to at least 59 kts (68 mph). Walls were blown down at construction sites in East Troy and Elkhorn. A gust of 71 kts (82 mph) was measured at the Lake Geneva Airport.



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### WISCONSIN, Southeast

19) Racine Co: a women was injured when a wind gust toppled a traffic signal light onto her vehicle near the intersection of Hwy 38 and MM. In Racine, a women was injured after a tree fell on her home. Elsewhere in Racine a police officer was injured by flying debris while out on a call. At Brown's Lake, a shed was destroyed. In Racine , a construction wall was blown down. Several other homes and businesses sustained damage from trees. A gust of 54 kts (62 mph) was measured near Racine.

20) Kenosha Co: a 16 year-old boy was electrocuted in Bristol as he tried to escape his car after a wind gust toppled a live electrical line on his car. A fire had started inside the vehicle. Near Salem on Hwy 50, a small car was partially airborne by wind gusts and blown into a ditch. A semi-truck was flipped over on I-94. The Kenosha Airport had a gust of 63 kts (72 mph), while near Salem a gust of 70 kts (81 mph) was measured. F50IW, M87VE, M87PH, M16VE

WIZ046>047-051>052-  
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23	1200CST	0	0	Excessive Heat
30	2359CST			

A historical heat wave affected southcentral and southeast Wisconsin during the last three days of November, and extended into early December. Numerous record high temperatures and record high minimum temperatures were tied or broken. A jet stream pattern locked in over southern Canada assured that low pressure system tracked north of Wisconsin, allowing southern Wisconsin to experience south to southwest winds and sunshine in unheard of proportions. Much above normal temperatures, but not record-setting, actually occurred as early as November 22nd, the first day of a long string of days with daytime maximum readings in the 50s and 60s. The 64 degrees registered in Madison on the 29th was the warmest so late in the season. The new record maximum and high minimum readings in Milwaukee on the 29th are the warmest so late in the season.

Here's a breakdown on the records:

November 23...Sheboygan...new record maximum of 58.

November 25...Madison...new record high minimum of 44.

November 27...Madison...record maximum of 65 tied.

Fond du Lac...new record maximum of 64.

Janesville...new record maximum of 64.

November 28...Milwaukee...new record maximum of 65, new record high minimum of 44.

Madison...new record maximum of 62

Fond du Lac...new record maximum of 64.

Janesville...new record maximum of 64.

Lake Geneva...new record maximum of 67.

November 29...Milwaukee...new record maximum of 66, new record high minimum of 55.

Madison...new record maximum of 64, new record high minimum of 53 .

Janesville...new record maximum of 66.

November 30...Milwaukee...new record maximum of 63.

Madison...new record maximum of 63.